

Non-responsive

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Lake Abrams Holding Ponds
 Middleburg Heights, Ohio
 OHD 980 510 218

WORKSHEET FOR COMPUTING PRELIMINARY HRS SITE SCORE

		<u>Pathway Score (S)</u>	<u>Pathway Score Squared (S²)</u>
1.	Groundwater Migration Pathway Score (S _{gw})	6.83	46.65
2a.	Surface Water Overland/Flood Migration Component (S _{of})	52.23	2,727.97
2b.	Groundwater to Surface Water Migration Component (S _{gs})	NI	NI
2c.	Surface Water Migration Pathway Score (S _{sw}) (Enter the larger of lines 2a and 2b.)	52.23	2,727.97
3.	Soil Exposure Pathway Score (S _s)	NI	NI
4.	Air Migration Pathway Score (S _a)	NI	NI
5.	$S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2$		2,774.62
6.	HRS Site Score (Divide the value on line 5 by 4.0 and take the square root.)		26.34

NI = Score not included because available information suggests that the pathway contributes little to the overall site score

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SOURCE CHARACTERIZATION WORKSHEET
(Continued)

Hazardous Substance	Available to Pathway						
	Air		Ground- water (GW)	Surface Water (SW)		Soil	
	Gas	Particulate		Overland/ Flood	GW to SW	Resident	Nearby
Dibenzofuran	Yes	Yes	Yes	Yes	Yes	No	Yes
2,4-Dimethylphenol	Yes	Yes	Yes	Yes	Yes	No	Yes
Fluorene	Yes	Yes	Yes	Yes	Yes	No	Yes
Indeno(1,2,3-cd)pyrene	No	Yes	Yes	Yes	Yes	No	Yes
2-Methylnaphthalene	Yes	Yes	Yes	Yes	Yes	No	Yes
Naphthalene	Yes	Yes	Yes	Yes	Yes	No	Yes
Phenanthrene	Yes	Yes	Yes	Yes	Yes	No	Yes
Phenol	Yes	No	Yes	Yes	Yes	No	Yes
Pyrene	Yes	Yes	Yes	Yes	Yes	No	Yes
Toluene	Yes	Yes	Yes	Yes	Yes	No	Yes

NE = Not evaluated because of lack of information

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Distance (Miles)	No. of Residential Wells	Population Served by Residential Wells	No. of Municipal Wells	Total Population	Ref.
0-1/4	1	2	0	2	Frost 1995
1/4-1/2	3	8	0	8	Frost 1995
1/2-1	14	34	0	34	Frost 1995
1-2	78	207	0	207	Frost 1995
2-3	54	133	0	133	Frost 1995
3-4	240	445	0	445	Frost 1995

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SURFACE WATER PATHWAY SCORESHEETS

<u>Comments</u>	<u>References</u>
<ul style="list-style-type: none">No observed releases to surface water have been documented; however, surface soil contamination was detected at levels significantly above background. Surface water from the site drains into the Lake Abrams holding pond, which then flows into Abrams Creek. Abrams Creek flows into the Rocky River. PRC therefore assumed that an observed release to Abrams Creek and the Rocky River could be documented if sediment samples were collected. An observed release was also assumed to calculate the surface water pathway score.	E&E 1991
<ul style="list-style-type: none">PRC assumed a release of a hazardous substance with a toxicity value of 10,000, a persistence value (river) of 1, freshwater bioaccumulation values (food chain and environmental) of 50,000, and a freshwater ecotoxicity value of 10,000.	E&E 1991; EPA 1990 and 1994
<ul style="list-style-type: none">The site's hazardous waste quantity factor value was calculated based on the volume of contaminated soil beneath the site (435,600 cubic yards), which results in a factor value of 100 according to Table 2-6 of the HRS Final Rule. Based on this factor value, a value of 100 was assigned to the waste characteristics factor category in accordance with Table 2-7 of the HRS Final Rule.	E&E 1991; EPA 1990
<ul style="list-style-type: none">No surface water intakes for drinking water exist within 15 miles downstream of the site.	PRC 1995b and 1995c
<ul style="list-style-type: none">The 60-year average flow rate of the Rocky River is about 276 cubic feet per second. Abrams Creek is assumed to be a small to moderate stream.	USGS 1992
<ul style="list-style-type: none">The Rocky River is used as a drinking water source upstream of the site; therefore, it is assumed that the Rocky River can be used as a drinking water source downstream of the site.	PRC 1995a
<ul style="list-style-type: none">The Rocky River is used for recreational purposes, including fishing. Varieties of fish caught in the Rocky River include steelhead trout, rock bass, and smallmouth bass; however, only records for the amount of trout caught are kept. An estimated 14,000 pounds of trout are caught and consumed annually within 15 miles downstream of the site; therefore, a human food chain population value of 31 was assigned in accordance with Table 4-18 of the HRS Final Rule. Even though estimates for the other varieties of fish caught in the Rocky River are not kept, it is likely that the total amount of fish caught and consumed from the Rocky River is less than 100,000 pounds per year.	PRC 1995d; EPA 1990

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

Factor Categories and Factors		Maximum Value	Value Assigned
<u>Drinking Water Threat</u>			
Likelihood of Release			
1.	Observed Release	550	550
2.	Potential to Release by Overland Flow		
2a.	Containment	10	
2b.	Runoff	25	
2c.	Distance to Surface Water	25	
2d.	Potential to Release by Overland Flow [lines 2a x (2b + 2c)]	500	
3.	Potential to Release by Flood		
3a.	Flood Containment	10	
3b.	Flood Frequency	50	
3c.	Potential to Release by Flood [lines 3a x 3b]	500	
4.	Potential to Release [lines 2d + 3c]	500	
5.	Likelihood of Release [higher of lines 1 and 4]	550	550
Waste Characteristics			
6.	Toxicity/Persistence	a	10,000
7.	Hazardous Waste Quantity	a	100
8.	Waste Characteristics	100	32
Targets			
9.	Nearest Intake	50	0
10.	Population		
10a.	Level I Concentrations	b	0
10b.	Level II Concentrations	b	0
10c.	Potential Contamination	b	0
10d.	Population [lines 10a + 10b + 10c]	b	0
11.	Resources	5	5
12.	Targets [lines 9 + 10d + 11]	b	5
13.	Drinking Water Threat Score [lines (5 x 8 x 12)/82,500] ^c	500	1.07

- a Maximum value applies to waste characteristics category
b Maximum value not applicable
c Do not round to nearest integer

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
(Continued)

Factor Categories and Factors	Maximum Value	Value Assigned
<u>Environmental Threat</u>		
Likelihood of Release		
22. Likelihood of Release [same value as line 5]	550	550
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/ Bioaccumulation	a	5×10^8
24. Hazardous Waste Quantity	a	100
25. Waste Characteristics	1,000	320
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	b	0
26b. Level II Concentrations	b	0
26c. Potential Contamination	b	3.95
27. Targets [lines 26a + 26b + 26c]	b	3.95
28. Environmental Threat Score [lines (22 x 25 x 27)/82,500]	60	8.43
Surface Overland/Flood Migration Component Score for a Watershed		
29. Watershed Score [lines 13 + 21 + 28] ^c	100	52.23
30. Surface Water Overland/Flood Migration Component Score (S_{of}) [highest score from line 29 for all watersheds evaluated] ^c	100	52.23

- a Maximum value applies to waste characteristics category
b Maximum value not applicable
c Do not round to nearest integer



State of Ohio Environmental Protection Agency

P.O. Box 1049, 1800 WaterMark Dr.
Columbus, Ohio 43266-0149
(614) 644-3020
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George V. Voinovich
Governor

Donald R. Schregardus
Director

August 16, 1995

RE: Lake Abrams Holding Ponds
Middleburg Heights
Cuyahoga County
OHD 980 510 218
FSIP Comments

Ms. Jeanne Griffin
U.S. Environmental Protection Agency
Region V
77 West Jackson Boulevard
(HSE-5J)
Chicago, IL 60604

Dear Ms. Griffin:

Ohio EPA has reviewed the Focused Site Inspection Prioritization document for the Lake Abrams Holding Ponds site in Cuyahoga County, Ohio. This report was prepared by PRC Environmental Management, Inc., and received in the Ohio EPA Northeast District Office on July 24, 1995.

Based on a district file search for this site and a review of the FSIP, Ohio EPA has no comments or corrections to this document.

Please do not hesitate to contact me at (216) 963-1126 if you have any questions about this correspondence.

Sincerely,

Julie L. Corkran
Project Coordinator
Division of Emergency and Remedial Response

JLC.wk

cc: Mike Eberle, NEDO/DERR
Christopher Scott, PRC EMI

RECEIVED
AUG 22 1995
SITE ASSESSMENT SECTION



U.S. ENVIRONMENTAL PROTECTION AGENCY RECOMMENDATION

Site Name: Lake Abrams Holding Ponds
Middleburg Heights, Cuyahoga County, Ohio

EPA ID No.: OHD 980 510 218

Report Author: Kevin Schnoes
PRC Environmental Management, Inc.
(312) 856-8700

Contractor Project Manager: Christopher Scott
PRC Environmental Management, Inc.
(312) 856-8700

EPA RECOMMENDATION

SIGNATURE

DATE

"H": High priority for further site assessment

"L": Low priority for further site assessment

"D": Deferred to other authority (RCRA,
TSCA, or NRC)

"N": No further action

8/21/95

EPA Comments:

